

Class Schedule - Spring 2008

Agricultural and Biological Engineering

199 **Undergraduate Open Seminar** credit: 1 to 5 hours.
May be repeated to a maximum of 12 hours.

CRN	Type	Section	Time	Days	Location	Instructor
10141	independent study		ARRANGED			
Instructor Approval Required						

222 **Agric & Biological Engrg II** credit: 4 hours.

Introduction to biomaterials and bioprocess design. Structure and composition of biomaterials, mass balances, force-deformation of biomaterials, and non-Newtonian fluid flow. Principles of environmental control for biological structures, psychrometrics, mass and heat transfer through buildings, and ventilation requirements. Prerequisite: One of MATH 220, MATH 221, MATH 234.

CRN	Type	Section	Time	Days	Location	Instructor
31031	laboratory	AB1	08:00 AM - 09:50 AM	R	room 242 Agricultural Engr Sciences Bld	Zhang, Y; Rodriguez, L
The lab for second half of the semester will be held in Room 220 AESB						
31029	laboratory	AB2	10:00 AM - 11:50 AM	R	room 242 Agricultural Engr Sciences Bld	Zhang, Y; Rodriguez, L
The lab in the second half of the semester will be held in 220 AESB						
29862	lecture	AL1	10:00 AM - 10:50 AM	MWF	room 204 Agricultural Engr Sciences Bld	Zhang, Y; Rodriguez, L

396 **Honors Independent Study** credit: 1 to 4 hours.

Individual research, special problems, thesis, development and/or design work for James Scholars under the direction of the honors advisor. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10163	independent study		ARRANGED			
Instructor Approval Required						

397 **Independent Study** credit: 1 to 4 hours.

Individual research, special problems, thesis, development and/or design work under the supervision of a member of the faculty. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
47262	independent study		ARRANGED			
Instructor Approval Required						

425 **Engrg Measurement Systems** credit: 4 hours.

Principles of instrumentation systems, including sensing, signal conditioning, computerized data acquisition, test design, data analysis and synthesis. Includes laboratory. Credit is not given for both ABE 425 and ME 360. Prerequisite: ECE 205.

CRN	Type	Section	Time	Days	Location	Instructor
39995	laboratory	AB1	08:30 AM - 09:50 AM	F	room 248 Agricultural Engr Sciences Bld	Grift, T
39997	lecture-discussion	AE1	08:30 AM - 09:50 AM	MW	room 248 Agricultural Engr Sciences Bld	Grift, T

436 **Renewable Energy Systems** credit: 3 or 4 hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Examines how renewable energy can reduce air pollution and global climate change. Includes a capstone project to design a system for converting renewable energy into thermal or electrical energy. Same as TSM 436. 3 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 211.

CRN	Type	Section	Time	Days	Location	Instructor
47444	laboratory	XW1	01:00 PM - 02:50 PM	W	room 204 Agricultural Engr Sciences Bld	Wang, X
	lecture	XW1	01:00 PM - 01:50 PM	TR	room 204 Agricultural Engr Sciences Bld	Wang, X
47445	laboratory	XW2	01:00 PM - 02:50 PM	W	room 204 Agricultural Engr Sciences Bld	Wang, X
	lecture	XW2	01:00 PM - 01:50 PM	TR	room 204 Agricultural Engr Sciences Bld	Wang, X

440 **Applied Statistical Methods I** credit: 4 hours.

Same as ANSC 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

Students must register for one lab-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
31583	laboratory	AB1	01:00 PM - 02:50 PM	T	room N120 Turner Hall	Bollero, G
31585	laboratory	AB2	03:00 PM - 04:50 PM	T	room N120 Turner Hall	Bollero, G
31587	laboratory	AB3	05:00 PM - 06:50 PM	T	room N120 Turner Hall	Bollero, G
31591	lecture	AL1	08:00 AM - 09:20 AM	TR	room 150 Animal Sciences Laboratory	Bollero, G

456 **Land & Water Resources Engrg** credit: 3 or 4 hours.

Hydrology, hydraulics, design, construction and cost estimating of structures for the conservation and quality control of soil and water resources; relationship of topography, soils, crops, climate, and cultural practices in conservation and quality control of soil and water for agriculture. Includes laboratory. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

CRN	Type	Section	Time	Days	Location	Instructor
29875	laboratory	G4	03:00 PM - 04:50 PM	M	room 204 Agricultural Engr Sciences Bld	Kalita, P
	lecture	G4	03:00 PM - 04:50 PM	W	room 204 Agricultural Engr Sciences Bld	Kalita, P
40185	laboratory	U3	03:00 PM - 04:50 PM	M	room 204 Agricultural Engr Sciences Bld	Kalita, P
	lecture	U3	03:00 PM - 04:50 PM	W	room 204 Agricultural Engr Sciences Bld	Kalita, P

463 **Electrohydraulic Systems** credit: 3 hours.

Engineering principles of electrohydraulic control systems related to off-road vehicles. Basics of fluid power systems, concepts of electrohydraulic systems and controls, analysis and design of electrohydraulic control systems, and applications of electrohydraulic control. Prerequisite: ECE 110 or both ECE 205 and ECE 206; ME 310 or TAM 335.

CRN	Type	Section	Time	Days	Location	Instructor
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49481	laboratory	QZ	10:00 AM - 11:50 AM	R	room ARR Agricultural Engr Sciences Bld	Zhang, Q
	lecture	QZ	01:00 PM - 01:50 PM	MW	room 242 Agricultural Engr Sciences Bld	Zhang, Q
Electrohydraulic Systems Lab meets in Room 129 AESB						

469 **Industry-Linked Design Project** credit: 4 hours.

Industry-submitted and sponsored design projects which utilize principles of design, engineering analysis and functional operation of engineering systems. Design teams develop concepts, evaluate alternatives, model and analyze solutions, and build and test a final product. Emphases on communication skills, technical writing, and interaction with industry representatives. Prerequisite: One of ABE 361, CHBE 421, TAM 335; or credit or concurrent registration in ME 370.

CRN	Type	Section	Time	Days	Location	Instructor
29870	laboratory	AB1	01:00 PM - 02:50 PM	R	room 242 Agricultural Engr Sciences Bld	Zahos, S
	laboratory	AB1	01:00 PM - 02:50 PM	T	room 242 Agricultural Engr Sciences Bld	Zahos, S
29872	lecture- discussion	AE1	11:00 AM - 11:50 AM	MWF	room 242 Agricultural Engr Sciences Bld	Zahos, S
Course is pending Provost Approval to change credit hours from 3 to 4. NO CHANGE IN CONTACT HOURS!!!!!!!!!!!!!!!!!!!!!! RLS						

485 **Food & Process Engrg Design** credit: 2 hours.

Design of equipment, processes, and facilities for food, pharmaceutical, biotechnology, and related process industries. Prerequisite: ABE 483.

CRN	Type	Section	Time	Days	Location	Instructor
29876	lecture- discussion	A	11:00 AM - 12:50 PM	T	room 242 Agricultural Engr Sciences Bld	Rausch, K

488 **Bioprocessing Grains for Fuels** credit: 3 hours.

Engineering and scientific principles governing bioprocessing of cereal grains for production of ethanol and other fermentation products. Process unit operations; conventional and alternative feed stock materials; recovery of value-added coproducts and other variables involved in producing fuel ethanol; process simulation; economic analysis. Prerequisite: CHBE 321 and TAM 251.

CRN	Type	Section	Time	Days	Location	Instructor
44855	lecture-discussion	VS1	03:00 PM - 04:20 PM	TR	room 208 Agricultural Engr Sciences Bld	Singh, V

498 **Special Topics** credit: 1 to 4 hours.

Group discussion or an experimental course on a special topic in agricultural and biological engineering. May be repeated to a maximum of 16 hours. Prerequisite: As specified for each topic offering; see Schedule or departmental course information.

CRN	Type	Section	Time	Days	Location	Instructor
10169	independent study		ARRANGED			
Instructor Approval Required						
49583	lecture	ECK	12:00 PM - 12:50 PM	MW	room 208 Agricultural Engr Sciences Bld	Eckhoff, S
2 hours Processing of Biomass						
45818	lecture-discussion	PK1	01:00 PM - 02:50 PM	TR	room 220 Agricultural Engr Sciences Bld	Kalita, P
2 hours Non-Point Pollution- Processes and Control Meets 14-Jan-08 - 07-Mar-08.						
29880	lecture-discussion	RC	05:00 PM - 06:50 PM	MW	room 208 Agricultural Engr Sciences Bld	Cooke, R
Section RC: Nonpoint source pollution modeling 3 hours						

502 **Graduate Research II** credit: 1 hours.

Research methodology, teaching methods, lecture preparation and delivery, critical review of scientific articles, peer review and publishing, mentoring and peer relationships, time management, and intellectual property.

CRN	Type	Section	Time	Days	Location	Instructor
29881	discussion-recitation	E	12:00 PM - 12:50 PM	R	room 204 Agricultural Engr Sciences Bld	Eckhoff, S

561 **Off-Road Vehicle Mechatronics** credit: 4 hours.

Fundamentals of mechatronic systems design; modeling of off-road vehicle systems, on-vehicle information management, and intelligent vehicle controls. Emphasizes integrated skills in designing mechatronic systems for off-road vehicles. Prerequisite: One of ABE 425, ME 461, MFG 430; ECE 486 or ME 460.

CRN	Type	Section	Time	Days	Location	Instructor
48885	lecture-discussion	B	03:00 PM - 03:50 PM	MWF	room 248 Agricultural Engr Sciences Bld	Zhang, Q

594 **Graduate Seminar** credit: 0 hours.

Presentations of thesis research by graduate students; other presentations on teaching or current research issues related to agriculture, biology, and engineering. Approved for S/U grading only. May be repeated up to a maximum of 6 times.

CRN	Type	Section	Time	Days	Location	Instructor
45390	lecture-discussion	MP1	12:00 PM - 12:50 PM	F	room 204 Agricultural Engr Sciences Bld	Bode, L

597 **Independent Study** credit: 1 to 4 hours.

Individual investigations or studies of any phases of agricultural engineering selected by the student and approved by the advisor and the faculty member who will supervise the study. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10174	independent study		ARRANGED			
Instructor Approval Required						